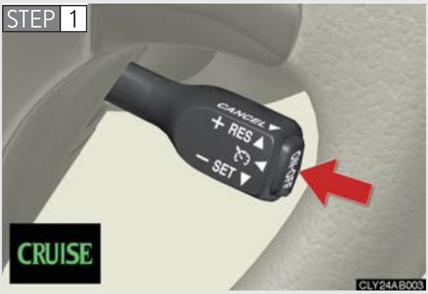
Cruise control (if equipped)

Use the cruise control to maintain a set speed without using the accelerator.

Set the vehicle speed

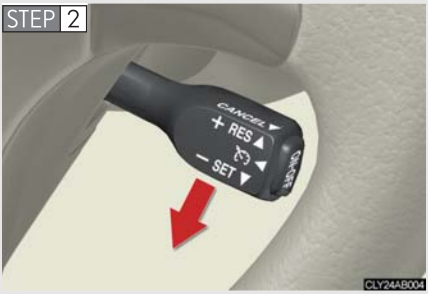
STEP 1



Turn the "ON-OFF" button on.

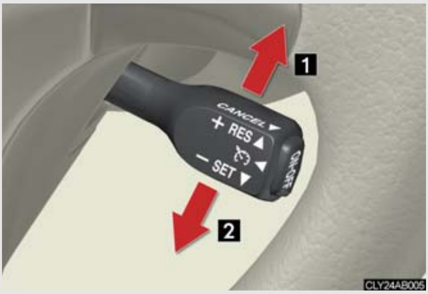
Push the button once more to deactivate the cruise control.

STEP 2



Accelerate or decelerate to the desired speed and press the lever down to set the cruise control speed.

Adjusting the speed setting



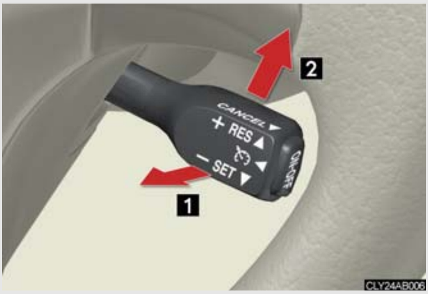
1 Increase speed

2 Decrease speed

Hold the lever until the desired speed setting is obtained.

Fine adjustment of the set speed (approximately 1.0 mph [1.6 km/h]) can be made by lightly pressing the lever up or down and releasing it.

Canceling and resuming regular acceleration



1 Cancel

Push the lever towards you to cancel cruise control.

The speed setting is also canceled when the brakes are applied or the clutch (manual transmission) is depressed.

2 Resume

To resume cruise control and return to the set speed, push the lever up.

Cruise control can be set when

- The shift lever is in the D or 4, 5 or 6 range of S. (vehicles with an automatic transmission)
- Vehicle speed is between approximately 25 mph (40 km/h) and 125 mph (200 km/h).

Accelerating

The vehicle can be accelerated normally.

Automatic cruise control cancellation

The set speed is automatically cancelled in any of the following situations.

- Actual vehicle speed falls more than 10 mph (16 km/h) below the preset vehicle speed
  At this time, the memorized set speed is not retained.
- Actual vehicle speed is below 25 mph (40km/h)
- VSC is activated

- **If the cruise control indicator light flashes**

  Turn the "ON-OFF" button off once, and then reactivate the system.
  If the cruise control speed cannot be set or if the cruise control cancels immediately after being activated, there may be a malfunction in the cruise control system. Have the vehicle inspected by your Lexus dealer.

CAUTION

- **To avoid operating the cruise control by mistake**

  Keep the "ON-OFF" button off when not in use.

- **Situations unsuitable for cruise control**

  Do not use cruise control in any of the following situations.
  Doing so may result in control of the vehicle being lost and could cause serious or fatal accident.

  - In heavy traffic
  - On roads with sharp bends
  - On slippery roads, such as those covered with rain, ice or snow
  - On steep hills
  - On winding roads

Dynamic radar cruise control (if equipped)

Dynamic radar cruise control supplements conventional cruise control with a vehicle-to-vehicle distance control. In the vehicle-to-vehicle distance control mode, the vehicle automatically accelerates or decelerates in order to maintain a set following distance from vehicles ahead.

Select cruise mode



Selecting vehicle-to-vehicle distance control mode

1. Turn the "ON-OFF" button on.

   Push the button once more to deactivate.



Selecting conventional constant speed control mode

1. Turn the "ON-OFF" button on.

   Push the button once more to deactivate.

   Vehicle-to-vehicle distance control mode is always reset when the "ENGINE START STOP" switch is switched to IGNITION ON mode.

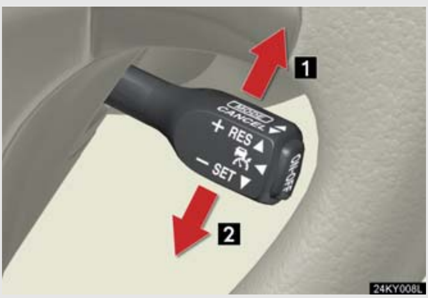
2. Switch to constant speed control mode.
   (push and hold for approximately one second)

n Driving in the selected cruise control mode



Accelerate or decelerate the vehicle to the desired speed and press the lever down to set.

n Adjusting the speed setting



1 Increase speed

2 Decrease speed

To change the set speed, operate the lever until the desired set speed is displayed.

Fine Adjustment (1mph

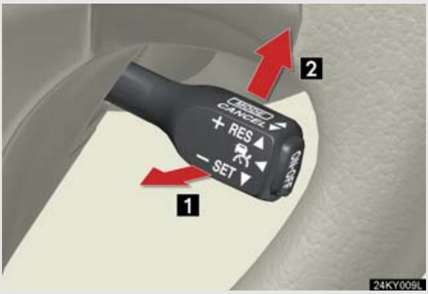
increments)

Momentarily move lever in desired direction and release

Coarse adjustment (5mph increments)

Hold the lever in the desired direction Coarse adjustment will continue to change the set speed approximately 5mph per second until the lever is released.

■ Canceling and resuming the speed setting



1 Cancel

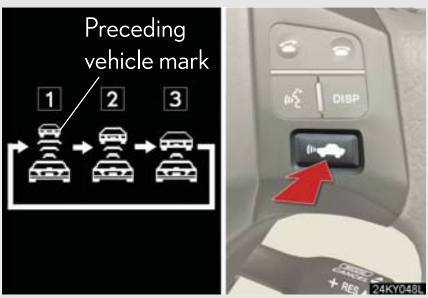
Push the lever towards you to cancel cruise control.

The setting is also canceled when the brakes are applied.

2 Resume

To resume cruise control and return to the set speed, push the lever up.

■ Changing the vehicle-to-vehicle distance



Each push of the switch changes the vehicle-to-vehicle distance

1 Long
2 Medium
3 Short

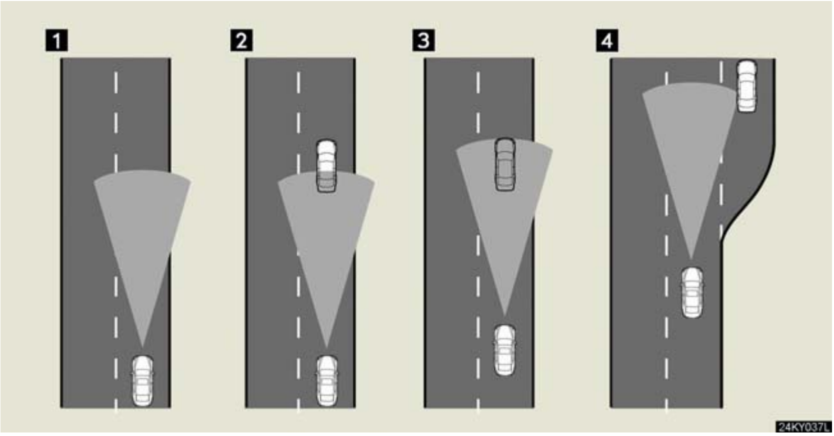
The vehicle-to-vehicle distance is automatically set to the long mode when the "ENGINE START STOP" switch is switched to IGNITION ON mode.

A mark will be displayed to indicate the presence of the vehicle if a vehicle is running ahead of you.

Driving in vehicle-to-vehicle distance control mode

This mode employs a radar sensor to detect the presence of vehicles within 328 ft. (100 m) ahead and to judge the distance between your vehicle and those vehicles.

Note that vehicle-to-vehicle distance will close when traveling on long downhill slopes.



1 Example of constant speed cruising (when there are no vehicles ahead): When set to 62 mph (100 km/h)

The vehicle travels at the speed set by the driver. The desired vehicle-to-vehicle distance can also be set by operating the vehicle-to-vehicle distance switch.

2 Example of deceleration cruising (when the vehicle ahead is driving slower than the set speed): When fixed speed cruising is set at 62 mph (100 km/h) and the vehicle ahead is driving at 50 mph (80 km/h)

When a vehicle is detected running ahead of you, in the same lane, the system automatically decelerates your vehicle. When a greater reduction in vehicle speed is necessary, the system applies the brakes. A warning tone warns you when the system cannot decelerate sufficiently to prevent your vehicle from closing on the vehicle ahead.

3 Example of follow-up cruising (when following a vehicle driving slower than the set speed): When the speed is set to 62 mph (100 km/h) and the vehicle ahead is driving at 50 mph (80 km/h)

The system continues follow-up cruising while adjusting for changes in the speed of the vehicle ahead in order to maintain the vehicle-to-vehicle distance set by the driver.

4 Example of acceleration (when there are no longer vehicles driving slower than the set speed in the lane ahead): When the speed is set to 62 mph (100 km/h) and the vehicle ahead driving at 50 mph (80 km/h) is out of the lane

When the vehicle ahead of you executes a lane change, the system slowly accelerates until the set vehicle speed is reached. The system then returns to fixed speed cruising.

Dynamic radar cruise control warning lights, messages and buzzers

Warning lights, messages and buzzers are used to indicate a system malfunction or to alert you to the need for caution while driving. (→P. 369)

The dynamic radar cruise can be set when

- The shift lever is in D or the 4, 5 or 6 range of S.
- Vehicle speed is between approximately 30 mph (45 km/h) and 85 mph (135 km/h).

Accelerating

The vehicle can be accelerated normally.

Automatically canceling vehicle-to-vehicle distance control

Vehicle-to-vehicle distance control driving is automatically canceled in the following situations.

- Vehicle speed falls below 25 mph (40 km/h)
- VSC is activated
- The sensor cannot operate correctly because it is covered in some way.
- The windshield wipers are operating at high speed.
- The “ECT SNOW” switch is set to snow mode.

If vehicle-to-vehicle distance control driving is automatically canceled for any other reason, there may be a malfunction in the system. Contact your Lexus dealer.

Automatically cancelling constant speed control

The set speed is automatically canceled in the following situations.

- Actual vehicle speed is more than 10 mph (16 km/h) below the preset vehicle speed
  At this time, the memorized set speed is not retained.
- Vehicle speed falls below 25 mph (40 km/h)
- VSC is activated

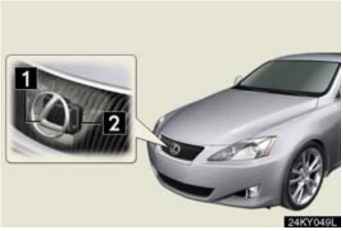
Vehicle-to-vehicle distance settings

Select a distance from the table below. Note that the distances shown correspond to a vehicle speed of 50 mph (80 km/h). Vehicle-to-vehicle distance increases/ decreases in accordance with vehicle speed.

Distance options	Vehicle-to-vehicle distance
Long	Approximately 164 ft. (50 m)
Medium	Approximately 132 ft. (40 m)
Short	Approximately 100 ft. (30 m)

Radar sensor and grille cover

Always keep the sensor and grille cover clean to ensure that the vehicle-to-vehicle distance control operates properly. (Some obstructions, such as snow, ice or plastic objects, cannot be detected by the obstruction sensor.)
Dynamic radar cruise control is canceled if an obstruction is detected.



1 Grille cover

2 Radar sensor

■ **Certification**

▶ For vehicles sold in U.S.A.

FCC WARNING
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF exposure information
This device complies with the FCC RF exposure requirements.

▶ For vehicles sold in Canada

Operation is subject to the following two conditions;

(1) This device may not cause interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation of the device.

CAUTION

■ **Before using dynamic radar cruise control**

Do not overly rely on vehicle-to-vehicle distance control.
Be aware of the set vehicle speed. If automatic deceleration/acceleration is not appropriate, adjust the vehicle speed, as well as the distance between your vehicle and vehicles ahead by applying the brakes, etc.

■ **To avoid inadvertent cruise control activation**

Keep the “ON-OFF” button off when not in use.

CAUTION

Situations unsuitable for dynamic radar cruise control

Do not use dynamic radar cruise control in any of the following situations.
Doing so may result in inappropriate control of speed and could cause serious or fatal accident.

- In heavy traffic
- On roads with sharp bends
- On winding roads
- On slippery roads, such as those covered with rain, ice or snow
- Where there are sudden changes between sharp up and down gradients
- At entrances to expressways
- When weather conditions are bad enough that they may prevent the sensors from functioning correctly (fog, snow, sandstorm, etc.)
- Where buzzer can be heard often

When the radar sensor may not be correctly detecting the vehicle ahead

Apply the brakes as necessary when any of the following types of vehicles are in front of you.
As the sensor may not be able to correctly detect these types of vehicles, the proximity alarm (→P. 369) will not be activated, and an accident may result.

- Vehicles that cut in suddenly
- Vehicles traveling at low speeds
- Vehicles that are not moving
- Vehicles with small rear ends (trailers with no load on board etc.)
- Motorcycles traveling in the same lane

CAUTION

Conditions under which the vehicle-to-vehicle distance control may not function correctly

Apply the brakes as necessary in the following conditions as the radar sensor may not be able to correctly detect vehicles ahead, and an accident may result.

- When water or snow thrown up by the surrounding vehicles hinders the functioning of the sensor
- When your vehicle is pointing upwards (caused by a heavy load in the trunk, etc.)
- When the road curves or when the lanes are narrow
- When steering wheel operation or your position in the lane is unstable

To ensure the radar sensor functions correctly

Do not do the following to the sensor or grille cover as doing so may cause the sensor not to function correctly and could result in an accident.

- Stick or attach anything to them
- Leave them dirty
- Disassemble, subject them to strong shocks
- Modify or paint them
- Replace them with non-genuine parts

Intuitive parking assist (if equipped)

The distance to obstacles measured by the sensors is communicated via the multi-information display and a buzzer when parallel parking or maneuvering into a garage. Always check the surrounding area when using this system.

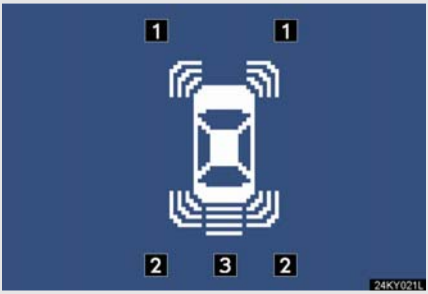
For vehicles equipped with a navigation system, refer to the separate "Navigation System Owner's Manual" for further details.

Types of sensors



1. Front corner sensors
2. Rear corner sensors
3. Back sensors

Multi-information display (→P. 139)



1. Front corner sensor operation
2. Rear corner sensor operation
3. Back sensor operation

■ **Intuitive parking assist switch (→P. 245)**

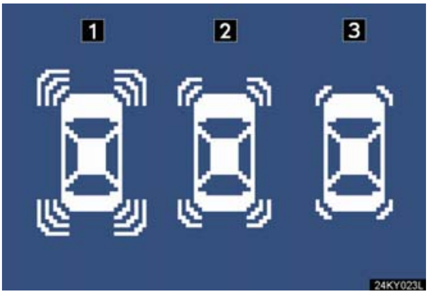


When on, an indicator is displayed to inform the driver that the function is operational.

The display and buzzer system

■ **Corner sensor operation display and distance to an obstacle**

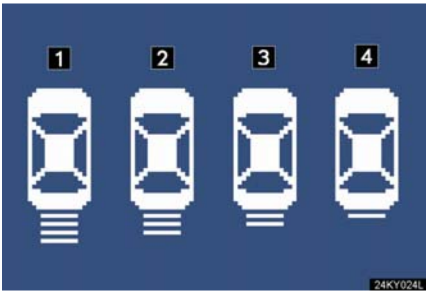
The system operates when the vehicle approaches within approximately 1.6 ft. (50 cm) of an obstacle.



1. Approximately 1.2 ft. (37.5 cm) to 1.6 ft. (50 cm) from the obstacle
2. Approximately 0.8 ft. (25 cm) to 1.2 ft. (37.5 cm) from the obstacle
3. Flashing: Within 0.8 ft. (25 cm) of the obstacle

Back sensor operation display and distance to an obstacle

The system operates when the vehicle approaches within approximately 4.9 ft. (150 cm) of an obstacle.



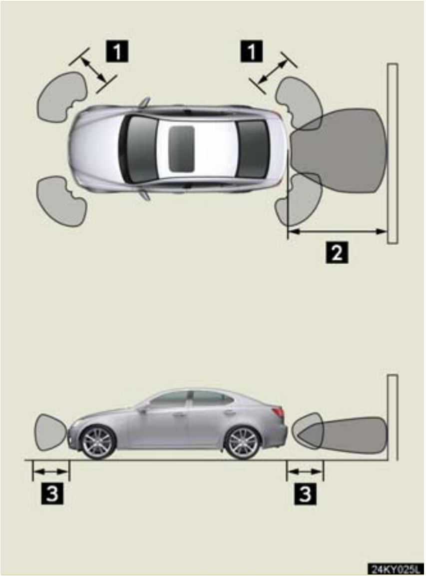
1. Approximately 2.0 ft. (60 cm) to 4.9 ft. (150 cm) from the obstacle
2. Approximately 1.5 ft. (45 cm) to 2.0 ft. (60 cm) from the obstacle
3. Approximately 1.1 ft. (35 cm) to 1.5 ft. (45 cm) from the obstacle
4. Flashing: Within 1.1 ft. (35 cm) of the obstacle

Buzzer operation and distance to the obstacle

A buzzer sounds when the corner sensors and back sensor are operating.

- The buzzer beeps faster as the vehicle approaches an obstacle. When the vehicle comes within the following distance of the obstacle, the buzzer sounds continuously.
  - Corner sensors: Approximately 0.8 ft. (25 cm)
  - Back sensors: Approximately 1.1 ft. (35 cm)
- When two or more obstacles are detected simultaneously, the buzzer system responds to the nearest obstacle.

Detection range of the sensors



1 Approximately 1.6 ft. (50 cm)

2 Approximately 4.9 ft. (150 cm)

3 Approximately 1.6 ft. (50 cm)

The diagram shows the detection range of the sensors. Note that the sensors cannot detect obstacles that are extremely close to the vehicle.

The range of the sensors may change depending on the shape of the object etc.

Sensor detection information

- Certain vehicle conditions and the surrounding environment may affect the ability of the sensor to correctly detect obstacles. Particular instances where this may occur are listed below.
  - There is dirt, snow or ice on the sensor.
  - The sensor is frozen.
  - The sensor is covered in any way.
  - The vehicle is leaning considerably to one side.
  - On an extremely bumpy road, on an incline, on gravel, or on grass.
  - The vicinity of the vehicle is noisy due to vehicle horns, motorcycle engines, air brakes of large vehicles, or other loud noises producing ultrasonic waves.
  - There is another vehicle equipped with parking assist sensors in the vicinity.
  - The sensor is coated with a sheet of spray or heavy rain.
  - The vehicle is equipped with a fender pole or wireless antenna.
  - Towing eyelets are installed.
  - The bumper or sensor receives a strong impact.
  - The vehicle is approaching a tall or curved curb.
  - In harsh sunlight or intense cold weather

In addition to the examples above, there are instances in which, because of their shapes, signs and other objects may be judged by the sensor to be closer than they are.

- The shape of the obstacle may prevent the sensor from detecting it. Pay particular attention to the following obstacles.
  - Wires, fences, ropes etc.
  - Cotton, snow and other materials that absorb radio waves
  - Sharply-angled objects
  - Low obstacles
  - Tall obstacles with upper sections projecting outwards in the direction of your vehicle

When the display flashes and a message is displayed

→P. 369

Certification (Canada only)

This ISM device complies with Canadian ICES-001.

Customization that can be configured at Lexus dealer

Settings (e.g. buzzer volume) can be changed. (Customizable features →P. 436)

CAUTION

Caution when using the intuitive parking sensor

Observe the following precautions.
Failing to do so may result in the vehicle being unable to be driven safely and possibly cause an accident.

- Do not use the sensor at speeds in excess of 6 mph (10 km/h).
- Do not attach any accessories within the sensor range.

NOTICE

Notes when washing the vehicle

Do not apply intensive bursts of water or steam to the sensor area.
Doing so may result in the sensor malfunctioning.

Driving assist systems

To help enhance driving safety and performance, the following systems operate automatically in response to various driving situations. Be aware, however, that these systems are supplementary and should not be relied upon too heavily when operating the vehicle.

■ ABS (Anti-lock Brake System)

Helps to prevent wheel lock when the brakes are applied suddenly, or if the brakes are applied while driving on a slippery road surface.

■ Brake assist

Generates an increased level of braking force after the brake pedal is depressed, when the system detects a panic stop situation.

■ VSC (Vehicle Stability Control)

Helps the driver to control skidding when swerving suddenly or turning on slippery road surfaces.

■ TRAC (Traction Control)

Maintains drive power and prevents the rear wheels (2WD models) or all wheels (AWD models) from spinning when starting the vehicle or accelerating on slippery roads.

■ Hill-start assist control (vehicles with an automatic transmission)

Prevents the vehicle from rolling backwards when starting on an incline or slippery slope.

■ EPS (Electric Power Steering)

Employs an electric motor to reduce the amount of effort needed to turn the steering wheel.

■ **VDIM (Vehicle Dynamics Integrated Management) (IS350)**

Provides integrated control of the ABS, brake assist, TRAC, VSC, hill-start assist control, and EPS systems.
Maintains vehicle stability when swerving on slippery road surfaces by controlling the brakes and engine output.

■ **PCS (Pre-Collision System) (if equipped)**

→P. 176

When the VSC/TRAC/hill-start assist control systems are operating



If the vehicle is in danger of slipping, rolling backwards when starting on an incline, or if the rear wheels (2WD) or 4 wheels (AWD) spin, the slip indicator light flashes to indicate that the VSC/TRAC/hill-start assist control systems have been engaged.

A buzzer (intermittent) sounds to indicate that VSC is operating.

The stop lights and high mounted stoplight turn on when the hill-start assist control system is operating.

To disable TRAC and/or VSC

If the vehicle gets stuck in fresh snow or mud, TRAC and VSC may reduce power from the engine to the wheels. You may need to turn the system off to enable you to rock the vehicle in order to free it.

Turning off TRAC



Quickly push and release the button to turn off TRAC.

The slip indicator light should come on.

Push the button again to turn the system back on.

Turning off TRAC and VSC



Push and hold the button for more than 3 seconds while the vehicle is stopped to turn off TRAC and VSC.

The slip indicator light and "VSC OFF" indicator light should come on.

Push the button again to turn the system back on.

Automatic reactivation of TRAC and VSC

Turning the "ENGINE START STOP" switch OFF after turning off the TRAC and VSC systems will automatically re-enable them.

Automatic TRAC reactivation

If only the TRAC system is turned off, the TRAC system will turn on when vehicle speed increases.

Automatic TRAC and VSC reactivation

If the TRAC and VSC systems are turned off, the systems will not turn on even when vehicle speed increases.

Sounds and vibrations caused by the ABS, brake assist, VSC, TRAC and hill-start assist control systems

- A sound may be heard from the engine compartment when the engine is started or just after the vehicle begins to move. This sound does not indicate that a malfunction has occurred in any of these systems.
- Any of the following conditions may occur when the above systems are operating. None of these indicates that a malfunction has occurred.
  - Vibrations may be felt through the vehicle body and steering.
  - A motor sound may be heard after the vehicle comes to a stop.
  - The brake pedal may pulsate slightly after the ABS is activated.
  - The brake pedal may move down slightly after the ABS is activated.

- **Hill-start assist control is operational when**
  - The shift lever is in the D or S position.
  - The brake pedal is not depressed.
- **Reduced effectiveness of EPS**

  The effectiveness of EPS is reduced to prevent the system from overheating when there is frequent steering input over an extended period of time. The steering wheel may feel heavy as a result. Should this occur, refrain from excessive steering input or stop the vehicle and turn the engine OFF. The system should return to normal within 10 minutes.

CAUTION

- **The ABS does not operate effectively when**
  - The limits of tire gripping performance have been exceeded.
  - The vehicle hydroplanes while driving at high speed on the wet or slick road.
- **Stopping distance when the ABS is operating will exceed that of normal conditions**

  The ABS is not designed to shorten the vehicle's stopping distance. Always maintain a safe distance from the vehicle in front of you in the following situations.
  - When driving on dirt, gravel or snow-covered roads
  - When driving with tire chains
  - When driving over bumps in the road
  - When driving over roads with potholes or roads with uneven roads

CAUTION

- **TRAC may not operate effectively when**

  Directional control and power may not be achievable while driving on slippery road surfaces, even if the TRAC system is operating.
  Do not drive the vehicle in conditions where stability and power may be lost.

- **If hill-start assist control does not operate effectively (vehicles with an automatic transmission)**

  The hill-start assist control may not operate effectively on steep inclines and roads covered in ice.

- **When the VSC is activated**

  The slip indicator light flashes and a warning buzzer sounds. Always drive carefully. Reckless driving may cause an accident. Exercise particular care when the indicator light flashes and a buzzer sounds.

- **When TRAC and VSC are off**

  Be especially careful and drive at a speed appropriate to the road conditions. As there are systems to ensure vehicle stability and driving force, do not turn off TRAC and VSC unless necessary.

- **Replacing tires**

  Make sure that all tires are of the same size, brand, tread pattern and total load capacity. In addition, make sure that the tires are inflated to the recommended tire pressure level.

  The ABS and VSC systems will not function correctly if different tires are fitted on the vehicle.
  Contact your Lexus dealer for further information when replacing tires or wheels.

- **Handling of tires and suspension**

  Using tires with any kind of problem or modifying the suspension will affect the driving assist systems, and may cause the system to malfunction.

PCS (Pre-Collision System) (if equipped)

Safety systems such as the brakes and seat belts are automatically engaged to lessen impact and injuries to occupants as well as vehicle damage when the radar sensor detects an unavoidable frontal collision.

Pre-collision seat belts

The seat belts are immediately retracted as the effect of the pretensioner is increased (→P. 53), to provide even greater constraining force to protect the driver and passengers. In the event of sudden braking or skidding, the system will operate even if no obstacle has been detected.

Pre-collision brake assist

Applies greater braking force in relation to how strongly the brake pedal is depressed.

Radar sensor



Detects vehicles or other obstacles on or near the road ahead and determines whether a collision is imminent based on the position, speed, and heading of the obstacles.

1. Grille cover
2. Radar sensor

Obstacles not detected

The sensor cannot detect plastic obstacles such as pylons. There may also be occasions when the sensor cannot detect pedestrians, animals, bicycles, motorcycles, trees, or snowdrifts.

■ **The pre-collision system is operational when**

- Seat belt (linked to the radar sensor)
  - Vehicle speed is above 3 mph (5 km/h).
  - The speed at which your vehicle is approaching the obstacle or oncoming vehicle exceeds 18 to 24 mph (30 to 40 km/h).
  - The front occupants are wearing a seat belt.
- Seat belts (linked to brake operation)
  - Vehicle speed exceeds 9 mph (15 km/h).
  - The system detects sudden braking or skidding.
  - The front occupants are wearing a seat belt.
- Brake Assist
  - Vehicle speed is above 18 mph (30 km/h).
  - The speed at which your vehicle is approaching the obstacle or the vehicle is greater than 18 to 24 mph (30 to 40 km/h).
  - The brake pedal is depressed.

■ **Conditions that may trigger the system even if there is no danger of collision**

- When there is an object by the roadside at the entrance to a curve
- When passing an oncoming vehicle on a curve
- When driving over a narrow iron bridge
- When there is a metal object on the road surface
- When driving on an uneven road surface
- When passing an oncoming vehicle on a left-turn
- When your vehicle rapidly closes on the vehicle in front

When the system is activated in the situations described above there is also a possibility that the seat belts will retract quickly and the brakes will be applied with a force greater than normal. When the seat belt is locked in the retracted position, stop the vehicle in a safe place, release the seat belt and refasten.

■ **When there is a malfunction in the system**

Warning lights and/or warning messages will turn on or flash. (→P. 360, 369)

CAUTION

Handling the radar sensor

Observe the following to ensure the pre-collision system can function effectively.

- Keep the sensor and front grille clean at all times.
  Clean the sensor and front grille with a soft cloth so you do not mark or damage them.
- Do not subject the sensor or surrounding area to a strong impact.
  If the sensor moves even slightly off position, the system may malfunction. If the sensor or surrounding area are subject to a strong impact, always have the area inspected and adjusted by a Lexus dealer.
- Do not disassemble the sensor.
- Do not attach accessories or stickers to the sensor, grille guard or surrounding area.

Limitations of the pre-collision system

Do not rely on the pre-collision system. Always drive safely, taking care to observe your surroundings and checking for any obstacles or other road hazards.